

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Presently Amended) A surgical instrument comprising:
 - (a) a handpiece having a tool supporting end, and a battery receiving end, the battery receiving end having:
 - a first set of substantially concentrically arranged electrical contacts; and
 - first and second opposing flanges substantially perpendicular to and opposing a longitudinal axis of the handpiece and separated by first and second gaps of substantially different widths opposing the longitudinal axis; and
 - (b) a sterile package comprising a single surgical use, disposable battery pack having an attachment end, the attachment end having:
 - a second set of substantially concentrically arranged electrical contacts; and
 - third and fourth flanges opposing the handpiece longitudinal axis, substantially parallel to and slidably engaged with the first and second opposing flanges, and configured to pass through a corresponding one of the first and second gaps in a single, predetermined relative position;
 - (c) ~~one of the battery receiving end and attachment end having an alignment post with a plurality of electrical contacts arranged concentric thereto, and the other thereof having a central opening defining a longitudinal axis with a set of electrical contact elements concentric to that axis; and~~
 - (d) wherein the two sets of contacts are adapted to become lockingly and conductively interengaged upon engagement of each of the ~~alignment post with the central opening and third and fourth flanges~~ with a corresponding one of the first and second flanges in response to rotation of the battery pack relative to the handpiece.
2. (Original) A surgical instrument as in Claim 1 wherein the battery pack has chemistry

based upon lithium/manganese dioxide, the battery pack after use being disposable into non-hazardous waste.

3. (Presently Amended) ~~[[A]] The surgical instrument as in Claim 1 further comprising a surgical tool coupled to the tool supporting end and configured for performing a cutting, shaping, or drilling cutting operation on live human bone or hard tissue, comprising:~~

~~(a) a handpiece having a tool supporting end, and a battery receiving end with a set of electrical contact elements thereon;~~

~~(b) a sterile package containing a disposable battery, the battery chemistry being based upon lithium/manganese dioxide;~~

~~(c) the disposable battery having an attachment end with a set of electrical contact elements on its attachment end;~~

~~(d) the handpiece and the battery each having a defined longitudinal axis, each set of electrical contact elements being arranged generally concentric to that axis, and wherein in response to rotation of the battery pack relative to the handpiece the sets of contacts are adapted to become lockingly and conductively interengaged prior to the surgical procedure.~~

4. (Presently Amended) ~~[[A]] The surgical instrument as in Claim 1 further comprising a surgical tool coupled to the tool supporting end and configured for performing a drilling operation on live human bone or hard tissue comprising:~~

~~(a) a handpiece having a tool supporting end, and a battery receiving end with an alignment post extending therefrom, the battery receiving end of the handpiece also having a set of electrical contact elements arranged in generally concentric relation to the alignment post;~~

~~(b) a single use, disposable battery pack having an attachment end with a central opening therein, and a set of mating electrical contact elements arranged in a generally circular configuration concentric to the central opening;~~

~~(c) the sets of mating contacts being adapted to come into a mutually concentric relation~~

~~in response to insertion of the alignment post into the central opening;~~

~~(d) the sets of contacts upon rotation of the battery pack relative to the handpiece being adapted to then become lockingly and conductively interengaged in a predetermined relative position; and~~

~~(e) means indicating by at least one of sight, sound, and touch that the predetermined relative position has been achieved.~~

5. (Presently Amended) A surgical instrument for performing a cutting, shaping, or drilling operation on live human bone or hard tissue, comprising:

(a) a handpiece having a battery receiving end with an alignment post extending therefrom and a tool supporting end for supporting a tool for performing a cutting, shaping, or drilling operation on live human bone or hard tissue; and

(b) a sterile package containing a single use, disposable battery pack which has an attachment end with a central opening therein;

(c) the central opening in the single use, disposable battery pack being adapted to insertably receive the alignment post so as to establish a mutual alignment axis of handpiece and battery pack;

(d) the battery receiving end of the handpiece and the attachment end of the single use, disposable battery pack having flat end surfaces adapted for abutting engagement while yet allowing relative rotation of the battery pack relative to the handpiece;

(e) the battery receiving end of the handpiece and the attachment end of the single use, disposable battery pack having mating sets of electrical contact elements, each set being arranged generally concentric to the mutual alignment axis; and

(f) wherein upon the insertion of the alignment post of the handpiece into the opening of the battery pack, the sets of mating contacts are adapted to then become lockingly and conductively interengaged in response to rotation of the battery pack relative to the handpiece.

6. (Original) The apparatus of Claim 5 wherein the chemistry of the disposable battery pack is based upon lithium/manganese dioxide.

7. (Original) The apparatus of Claim 5 including means providing a spring-supported snap action whereby the sets of mating contacts become lockingly and conductively interengaged in response to rotation of the battery pack relative to the handpiece.

8. (Original) The apparatus of Claim 7 wherein the spring-supported snap action means provides an audible sound indicating that the mating contacts and the battery have been correctly and securely locked in position.

9. (Original) The apparatus of Claim 5 wherein the battery receiving end of the handpiece, and the attachment end of the battery pack, each has a non-circular external cross-sectional configuration, the two external configurations being closely similar in both size and shape, and the rotational position of the battery pack for locking the contacts being such that the handpiece and the battery pack then provide an essentially continuous external surface which indicates to the hand of the operator that correct alignment of the contacts has been achieved.

10. (Original) The apparatus of Claim 9 including means providing a spring-support snap action whereby the sets of mating contacts become lockingly and conductively interengaged in response to rotation of the battery pack relative to the handpiece.

11. (Presently Amended) A surgical instrument for performing a surgical drilling procedure on bone or hard tissue, comprising:

(a) a handpiece having a rotary driven drilling member supported by a tool supporting end, and a battery receiving end with an alignment post extending therefrom, the battery receiving end of the handpiece also having a set of electrical contact elements arranged in

generally concentric relation to the alignment post;

(b) a disposable battery having an attachment end with a central opening therein, and a set of mating electrical contact elements arranged in a generally circular configuration concentric to the central opening therein;

(c) the central opening in the disposable battery being adapted to receive the alignment post of the handpiece in a partially inserted position so as to establish a pre-attachment alignment thereof;

(d) the sets of mating contacts being adapted to come into a mutually concentric relation in response to a further insertion of the alignment post into the central opening; and

(e) the sets of contacts being adapted to then become lockingly and conductively interengaged upon rotation of the battery pack relative to the handpiece.

12. (Original) The apparatus of Claim 11 wherein the chemistry of the disposable battery is based upon lithium/manganese dioxide, and which further includes a sterile package containing the disposable battery.

Claims 13-28. (Canceled)

29. (Presently Amended) A surgical instrument for removing live human bone or hard tissue, comprising:

a handpiece ~~having a non-circular external cross-sectional configuration and~~ including:

a first end ~~configured to orient and secure a tool~~ supporting a rotary driven tool configured to remove live human bone or hard tissue by rotation of a cutting member in response to rotary drive means within the handpiece; and

a second end having:

an alignment post extending therefrom and defining a handpiece longitudinal axis; and

a plurality of handpiece electrical contacts arranged concentric to the handpiece longitudinal axis; and
~~flat end surfaces; and~~
a sterile, disposable battery pack ~~having a non-circular external cross-sectional configuration and~~ including:
lithium/manganese dioxide batteries; and
an attachment end configured to be secured to the handpiece second end by means of a rotating movement of the disposable battery pack relative to the handpiece, the attachment end having:
an opening therein defining a battery pack longitudinal axis; and
a plurality of battery pack electrical contacts arranged concentric to the battery pack longitudinal axis; ~~and~~
~~flat end surfaces configured for abutting engagement with the handpiece flat end surfaces while allowing rotation of the battery pack relative to the handpiece;~~ wherein
the attachment end opening is configured to receive the handpiece alignment post so as to establish a mutual alignment axis between the handpiece longitudinal axis and the battery pack longitudinal axis; and
the pluralities of the handpiece and battery pack contacts are mating pluralities of contacts configured to be lockingly and conductively interengaged in response to the rotating movement; ~~and~~
~~the handpiece and the battery pack provide an essentially continuous external surface when the pluralities of the handpiece and battery pack contacts are lockingly and conductively interengaged.~~

30. (New) The surgical instrument of Claim 29 wherein the handpiece and the disposable battery pack each have a substantially non-circular external cross-sectional

configuration and provide a substantially continuous external surface when the pluralities of handpiece and battery pack contacts are lockingly and conductively interengaged.

31. (New) The surgical instrument of Claim 29 wherein the handpiece second end includes first flat end surfaces and the disposable battery pack includes second flat end surfaces configured for abutting engagement with the first flat end surfaces while allowing rotation of the battery pack relative to the handpiece.

32. (New) The surgical instrument as in Claim 1 further comprising a surgical tool coupled to the tool supporting end and configured for performing a shaping operation on live human bone or hard tissue.